

Overview

Installed at the display device, the UDM-RX02 (FG-UDM-RX02) converts the signal received from a UDM Multi-Format Distribution Hub to standard A/V signals (FIG. 1).



FIG. 1 UDM-RX02

With all the same features of the UDM-RX01, the UDM-RX02 adds support for "Common" mode sync, as well as remote power for long cable distance runs.

Compatibility

The UDM-RX02 is compatible for use with the following UDM Hubs:

- UDM-0102 (FG-UDM-0102) - This hub supports Common Synch Mode.
- UDM-0404 (FG-UDM-0404) - This hub supports Common Synch Mode.
- UDM-1604 (FG-UDM-1604C) - This hub supports Common Synch Mode.
- UDM-1604 (FG-UDM-1604) - This hub does not support Common Synch Mode. In this case, the UDM-RX02 will function, but without Common Synch Mode.

Product Specifications

UDM-RX02 Specifications	
Power Requirements:	24VDC @ .75A Note: In most cases the UDM-RX02 is remotely powered by the UDM Multi-Format Distribution Hub (see Powering on the UDM-RX02).
Rear Panel Connectors:	
Power Socket:	2.1mm barrel-style DC power socket (female)
UDM Hub (RJ45) Port:	Provides audio/video transport as well as control via Cat5, Cat5e or Cat6 to an UDM Hub.
Serial (RJ12) port:	Enables an administrator to control the various functions to the UDM-RX02 from a command line prompt and terminal connection. • Requires a DB9-to-RJ12 adapter cable (FG-RS01) to connect to a PC. • 9600, 8 bit, No Parity, 1 Stop Bit
IR Rx Port:	3.5mm stereo input port, for connection of an IR receiver to allow setup of the UDM-RX02, local compensation controls, and remote control of centrally located IR devices.
IR Tx Port:	3.5mm stereo IR Transmitter output port allows one IR-controlled device (such as a DVD or VCR player) to be controlled via optional wired IR emitter.
Audio Connectors:	<ul style="list-style-type: none"> • Black RCA female connector - Digital audio • White RCA female connector - Analog audio Left • Red RCA female connector - Analog audio Right
Video Connectors:	<ul style="list-style-type: none"> • Yellow RCA female connector - CVBS (supports composite video) • S-Video - S-video female connector • VGA - HD15 female connector (supports VGA video) • Green RCA female connector - Component output: Y • Blue RCA female connector - Component output: Pb • Red RCA female connector - Component output: Pr
Operating Environment:	<ul style="list-style-type: none"> • 35°F - 95°F (5°C - 35°C) • Max. relative humidity - 85% (non-condensing)
Dimensions (HWD):	1" x 8 15/16" x 3 3/8" (25 mm x 227 mm x 85 mm)
Weight:	1.45 lb. (658 g)
Certifications:	<ul style="list-style-type: none"> • CE • FCC part 15 Class A
Other AMX Equipment:	<ul style="list-style-type: none"> • RS232 DB9/RJ12 Connection Cable (FG-RS01) • UDM-RC02 Multi-Format IR Remote Control (FG-UDM-RC02) • IR01 IR Emitter Module (FG-IR01) • IR03 External IR Receiver Module (FG-IR03) • UDM-PS 24VDC, 750mA Power Supply (FG-UDM-PS)

Configuration

The UDM-RX02 is configured via the UDM Hub's WebConsole. Refer to the UDM Hub's *Operation/Reference Guide* for details.

Rear Panel Components

All of the connectors and ports are located on the rear panel (FIG. 2):

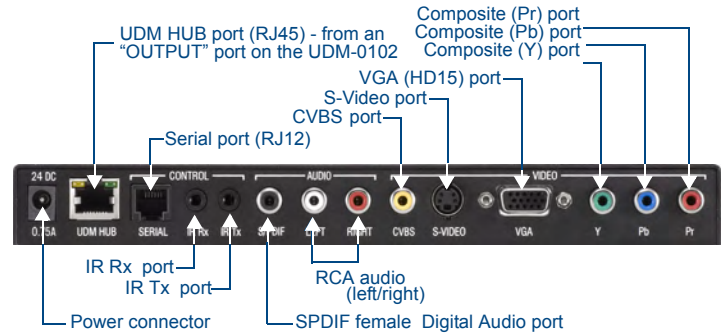


FIG. 2 UDM-RX02 - rear panel components

UDM Hub Port (RJ45)

The UDM-RX02 connects to a UDM Hub through a Cat 5/Cat 6 connection. Refer to the UDM Hub's *Operation/Reference Guide* for details.

Serial Port

The Serial port is available for diagnostic and troubleshooting purposes.

The Serial port on the UDM-RX02 is an RJ12 connector, and requires a DB9-to-RJ12 adapter cable (FG-RS01) to connect to a PC for Terminal control.

IR Receiver (IR Rx) Port

The **IR Rx** port is used to enable user control and the remote compensation of the video link to the UDM, using the FG-UDM-RC10 and the FG-IR03.

Refer to the *Protocols and IR Learning* section of the UDM Hub's *Operation/Reference Guide* for details for information on learning a device's IR commands.

IR Transmit (IR Tx) Port

The **IR Tx** port issues IR commands from the UDM-RX02 to a controlled display device (TV monitor or display). One IR display device can be connected to the UDM-RX02 via the IR Tx port, and controlled via the UDM Hub's WebConsole or via remote control.

Connecting an IR Device to the IR Tx Port

1. Connect an IR01 Endeleo IR Emitter Module (FG-IR01) to the IR Tx port on the UDM-RX02.
Note: Ensure the position of the device corresponds to the position assigned in the *Devices* option of the UDM- Hub's WebConsole.
2. Run the other end of the IR emitter cable to the device's IR sensor, and attach the IR Emitter to the device's sensor by removing the cover on the reverse side of the IR Emitter.

IR commands for each device on the system have to be learned by the UDM-0102 in order to function properly. Refer to the *Protocols and IR Learning* section of the UDM Hub's *Operation/Reference Guide* for information on learning a device's IR commands.

AUDIO Connectors

The UDM-RX02 provides standard Audio RCA output connectors for S/PDIF for digital audio, and LEFT/RIGHT for analog audio output (FIG. 2).

VIDEO Connectors

VGA Input at Display Device

1. Attach one end of the VGA cable to the **VGA** connector on the UDM-RX02.
2. Run the other end to the VGA connector on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX02.
Note: Ensure the UDM Hub port the RX02 is attached to is configured correctly within the Hub's configuration software. Also ensure the correct Audio Type (Analog L/R, S/PDIF, or None) is selected for the relevant input.

Composite Input at Display Device

1. Attach the composite cable (normally yellow) to the **CVBS** connector on the UDM-RX02.
2. Run the other end of the composite cable to the Composite connector (normally yellow) on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX02.

SVideo Input at Display Device

1. Attach the SVideo cable to the 4-pin **S Video** connector on the UDM-RX02.
2. Run the other end of the SVideo cable to the SVideo connector on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX02.

Component Input at Display Device

1. Attach the Component cables (normally green, blue and red) to the **Y** (green), **Pb** (blue) and **Pr** (red) connectors on the UDM-RX02.
2. Run the other end of the Component cable to the Component connectors (normally green, blue and red) on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX02.

Audio & Video Formats/Resolutions/Distance

Audio & Video Formats/Resolutions/Distance			
Class	Format	Name	Distance
Composite	720x480	NTSC	300 m / 1000'
	720x576	PAL	300 m / 1000'
Component	720x480	480p	300 m / 1000'
	720x576	576p	300 m / 1000'
	1280x720	720p	300 m / 1000'
	1920x1080	1080i	300 m / 1000'
	1920x1080	1080p	300 m / 1000'
VGA	640x480	VGA	300 m / 1000' *
	800x600	SVGA	300 m / 1000' *
	1024x768	XGA	300 m / 1000' *
	1280x1024	SXGA	300 m / 1000' *
	1600x1200	UXGA	300 m / 1000' *
	* When using VGA modes with audio enabled , the maximum cable distance is approximately 200 m / 650'.		

Note: The maximum distances indicated above are not absolute, but are recommended distances that have been tested to deliver video at the specified resolutions, without significant signal degradation. In particular, lower resolutions (640 x 480, 720 x 480 and 800 x 600) can often be delivered significantly further than what is indicated in the table. Refer to the UDM Hub's Operation/Reference Guide for additional details on maximum cable distances.

Video Compensation

Video at the Receive end can be compensated using three main methods;

- Using the UDM Hub's WebConsole
- Using the UDM-RC02 Multi-Format IR Remote Control
- Using a hyper terminal session via the serial connector on the UDM-RX02 (especially effective setup method when using long runs)

Connecting an External IR Receiver Module

If passthrough mode (where a device such as a DVD or VCR can be controlled via a UDM-RC02 Multi-Format IR Remote Control) is required then an IR03 External IR Receiver Module will be needed to pick up IR controls from the remote control. Additionally, if the UDM-RX02 is to be compensated via a remote control, then an IR Receiver Module is also needed.

Connecting the UDM-RX02 Receiver to the UDM Hub

The RJ45 port on the front panel of the UDM-0102 Hub labelled "UDM" supports one UDM-RX02 Receiver. The UDM-RX02 is then be connected to a display device.

1. Connect a standard Cat5/6 Ethernet cable to the RJ45 port labelled **UDM** on the front panel of the UDM hub.
2. Connect the other end of the Ethernet cable to the RJ45 port labelled **UDM Hub** on the rear panel of the UDM-RX02.

Note: Ensure the UDM Hub port the RX02 is attached to is configured correctly within the Hub's configuration software. Also ensure the correct Audio Type (Analog L/R, S/PDIF, or None) is selected for the relevant input.

UDM HUB Port LEDs

2 LEDs are visible at the **UDM Hub** port (on the UDM-RX02) when the UDM-0102 is switched on:

- **Green** – Connection to UDM-0102 (if Cat 5 removed, LED switches off).
- **Amber** – Power (as well as comms if uploading protocols etc. the Amber LED may flicker).

Powering on the UDM-RX02

The UDM-RX02 may be powered by its hub device through a standard CAT5 cable, but it may also be powered through an optional 24 VDC power supply (FG-UDM-PS) intended to augment power for very long cable runs.

To connect the UDM-RX02 to the optional power supply, insert the barrel connector of the power supply into the power connector on the UDM-RX02 (see FIG. 2).

To power down the UDM-RX02, remove the barrel connector of the power supply from the power connector and then remove the Ethernet cable from the *UDM Hub* connector.

Note: Disconnecting the optional power supply will not power down the UDM-RX02 if its Ethernet connection to the UDM Hub is intact.

System Overview

FIG. 3 provides a basic system diagram representing a UDM-0102 Hub, UDM-RX02 Receiver, and connected devices:

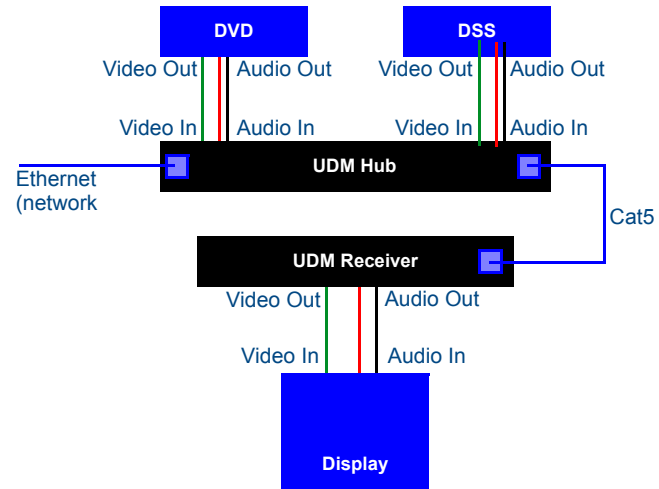


FIG. 3 UDM System Diagram

Additional Documentation

Refer to the *UDM-0102 and UDM-RX02 Multi-Format Distribution Hub and Receiver Operation/Reference Guide* (available online at www.amx.com) for detailed information on configuring the Hub, UDM receivers and source devices.

